FIG.1

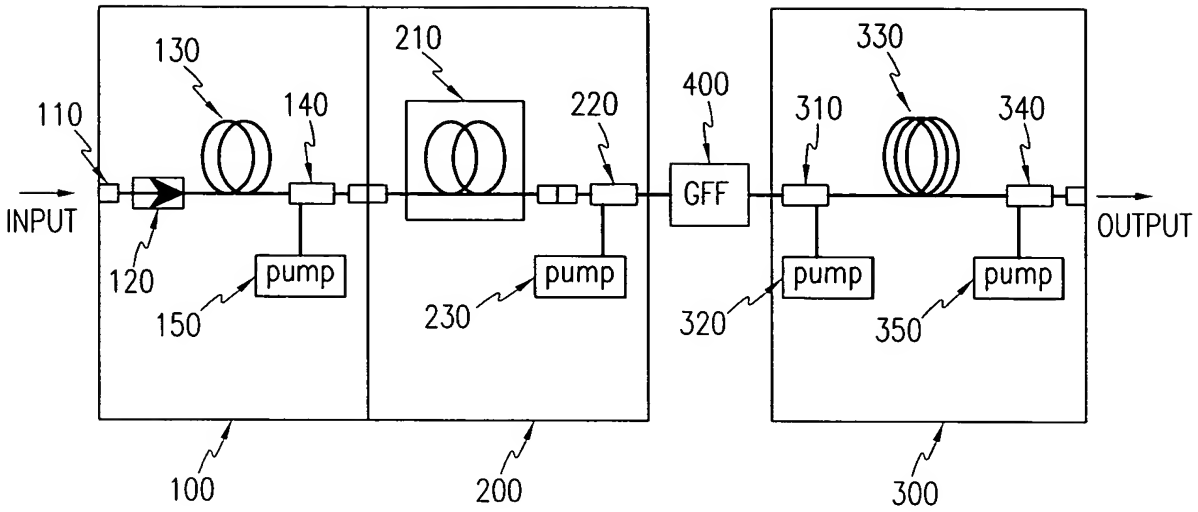

INPUT
110
120
130
140
150
pump
210
220
230
pump
400
GFF
310
330
340
320
350
pump
pump
OUTPUT
100
200
300

FIG.2

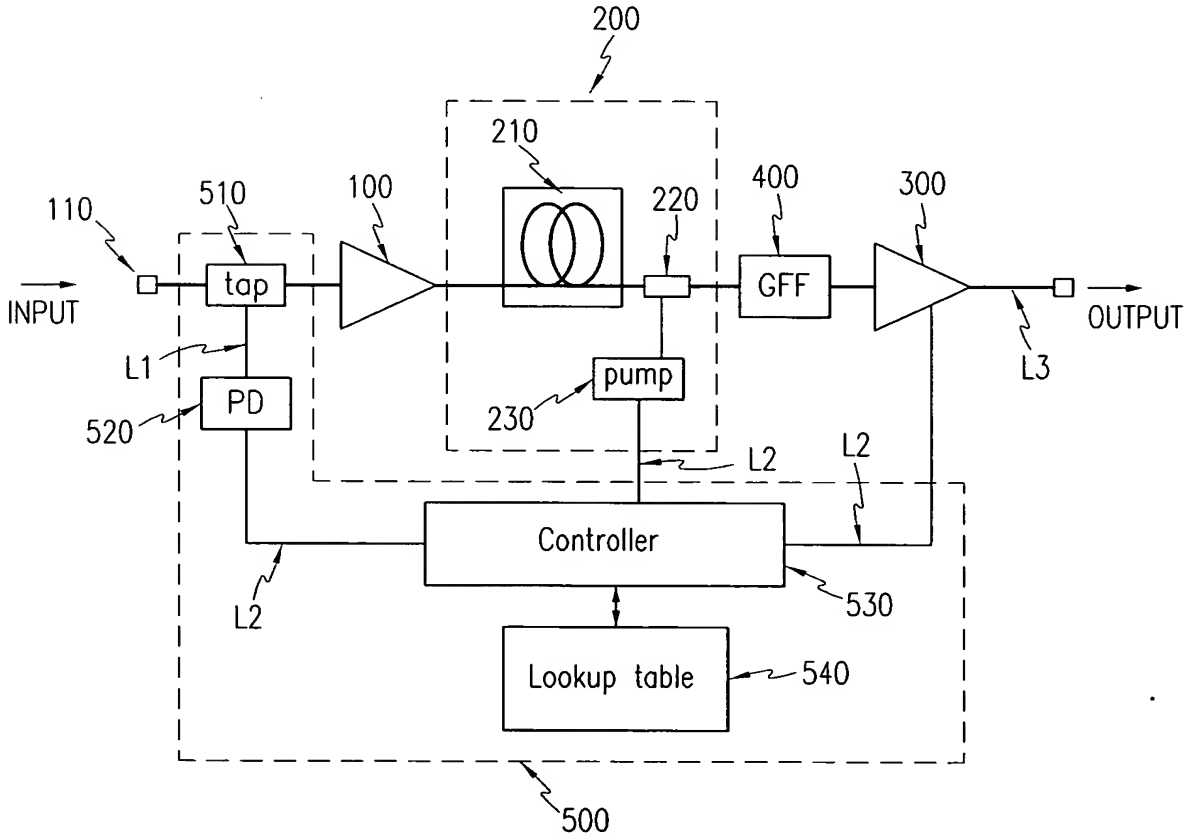

200
210
110
510
100
220
400
300
INPUT
tap
GFF
OUTPUT
L1
PD
520
pump
230
L3
L2
L2
Controller
530
L2
Lookup table
540
500

FIG.3

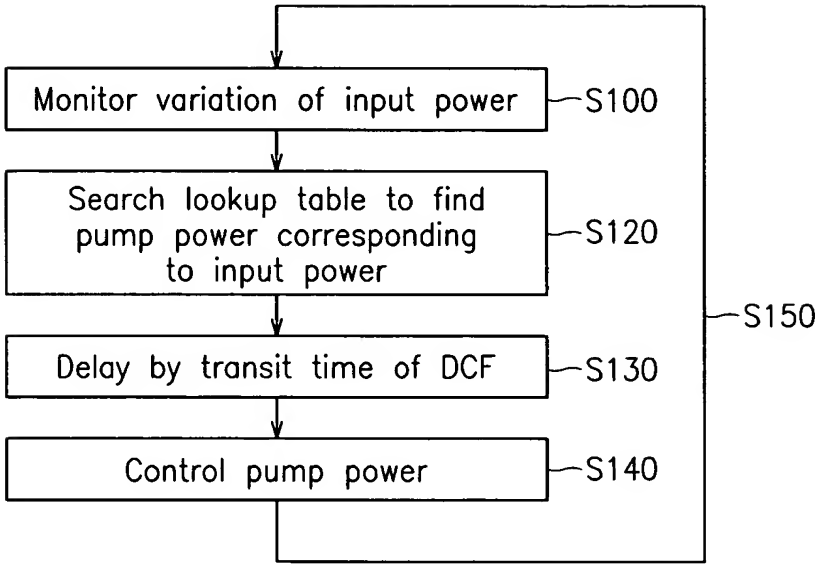

Monitor variation of input power
S100
Search lookup table to find pump power corresponding to input power
S120
Delay by transit time of DCF
S130
Control pump power
S140
S150

FIG.4

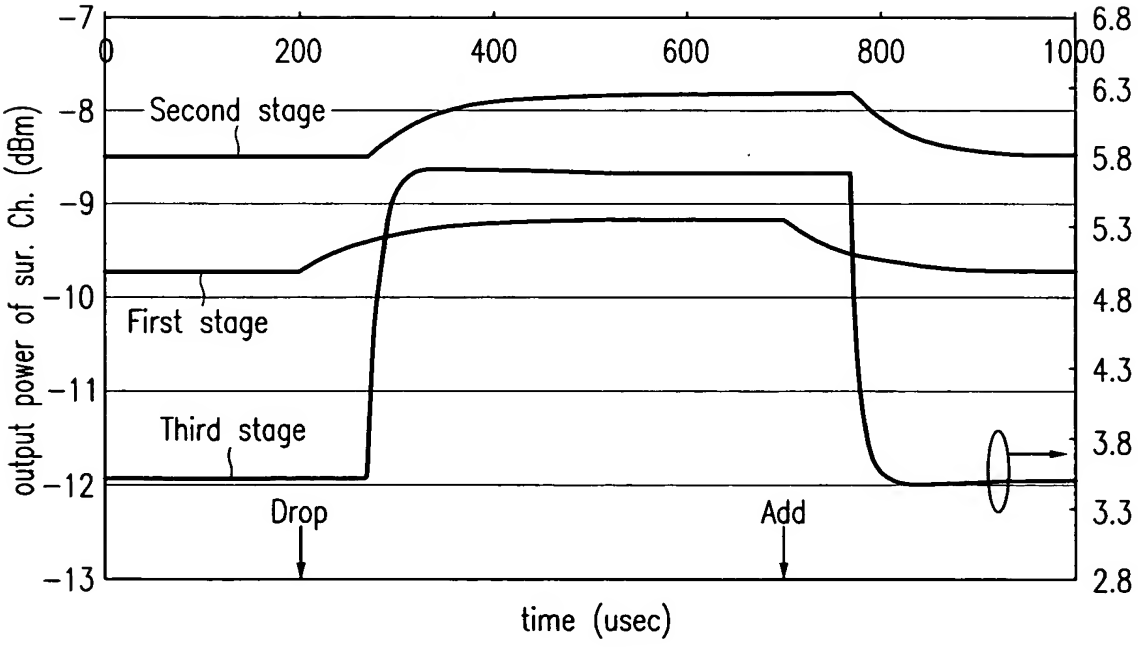

output power of sur. Ch. (dBm)
-7
-8
-9
-10
-11
-12
-13
0
200
400
600
800
1000
6.8
6.3
5.8
5.3
4.8
4.3
3.8
3.3
2.8
Second stage
First stage
Third stage
Drop
Add
time (usec)

FIG.5

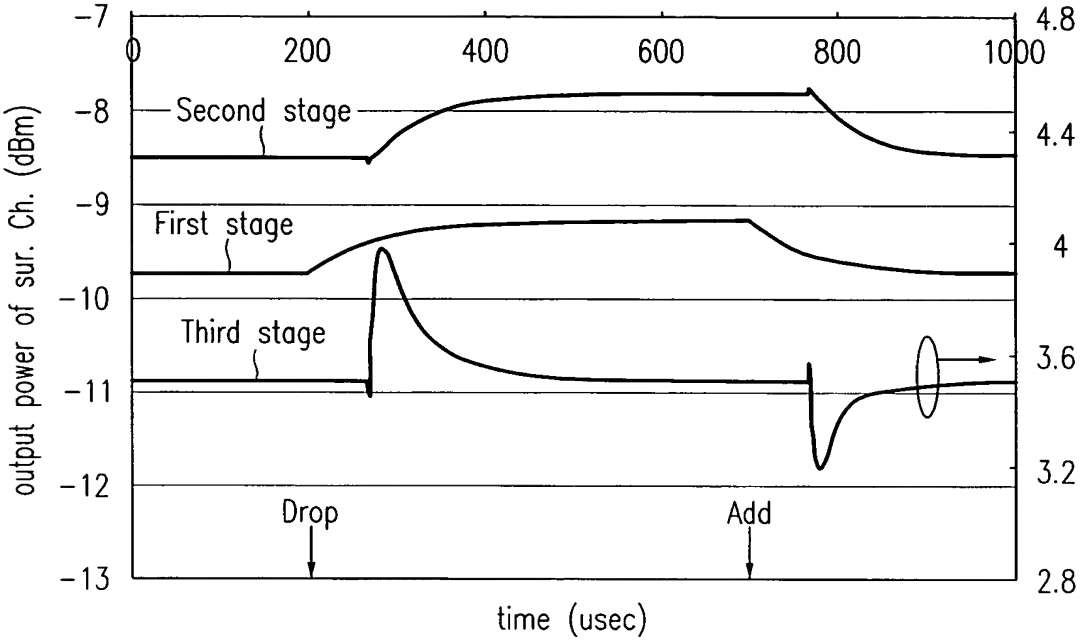

-7
-8
-9
-10
-11
-12
-13
0
200
400
600
800
1000
4.8
4.4
4
3.6
3.2
2.8
Second stage
First stage
Third stage
Drop
Add
output power of sur. Ch. (dBm)
time (usec)

FIG.6

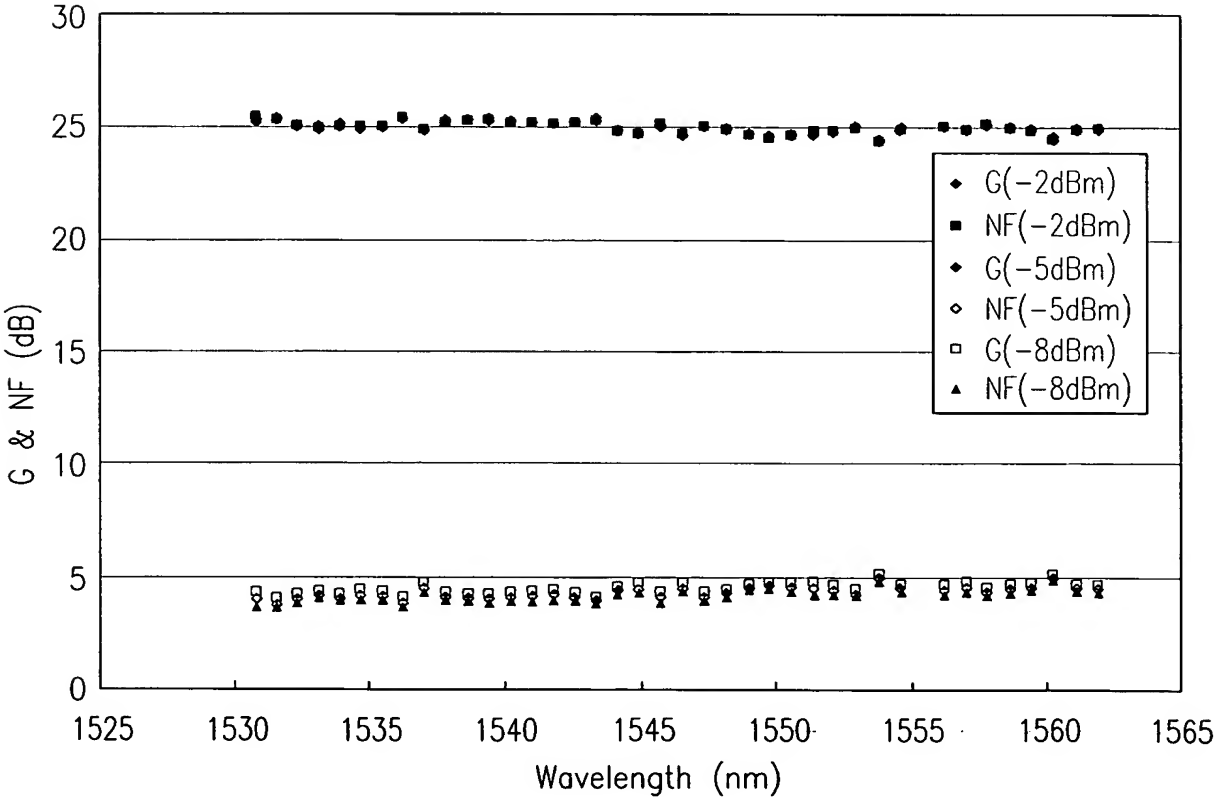

30
25
20
15
10
5
0
1525
1530
1535
1540
1545
1550
1555
1560
1565
G & NF (dB)
Wavelength (nm)
G(-2dBm)
NF(-2dBm)
G(-5dBm)
NF(-5dBm)
G(-8dBm)
NF(-8dBm)

FIG.7

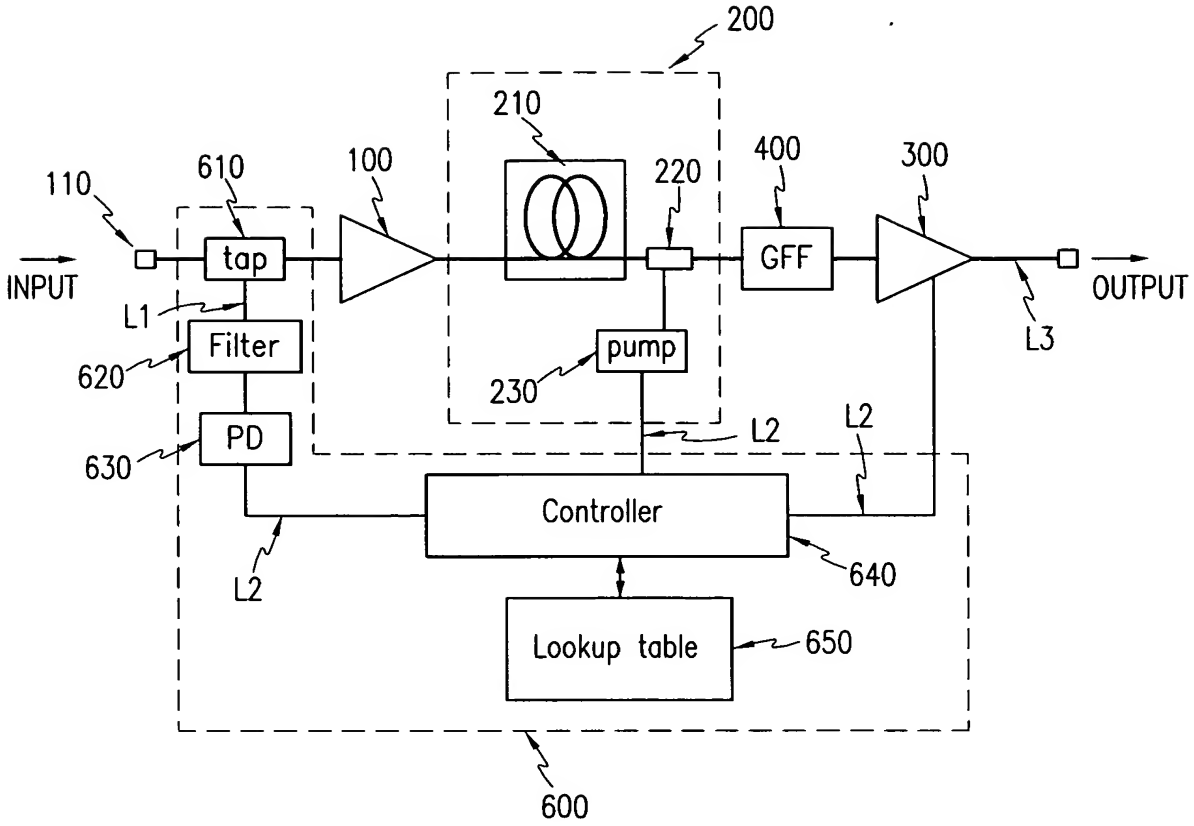

200
210
110
610
100
220
400
300
INPUT
tap
GFF
OUTPUT
L1
Filter
pump
620
230
L3
PD
L2
L2
630
Controller
L2
640
Lookup table
650
600

FIG.8

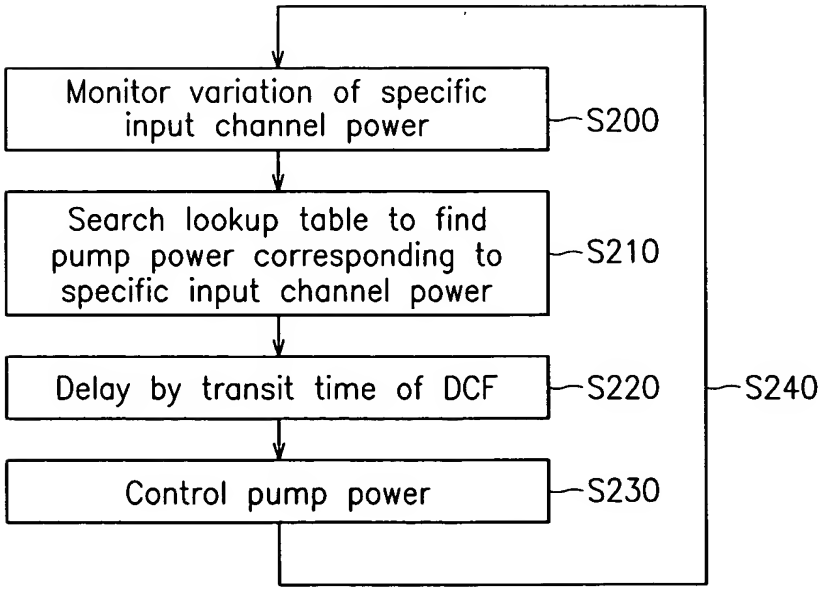
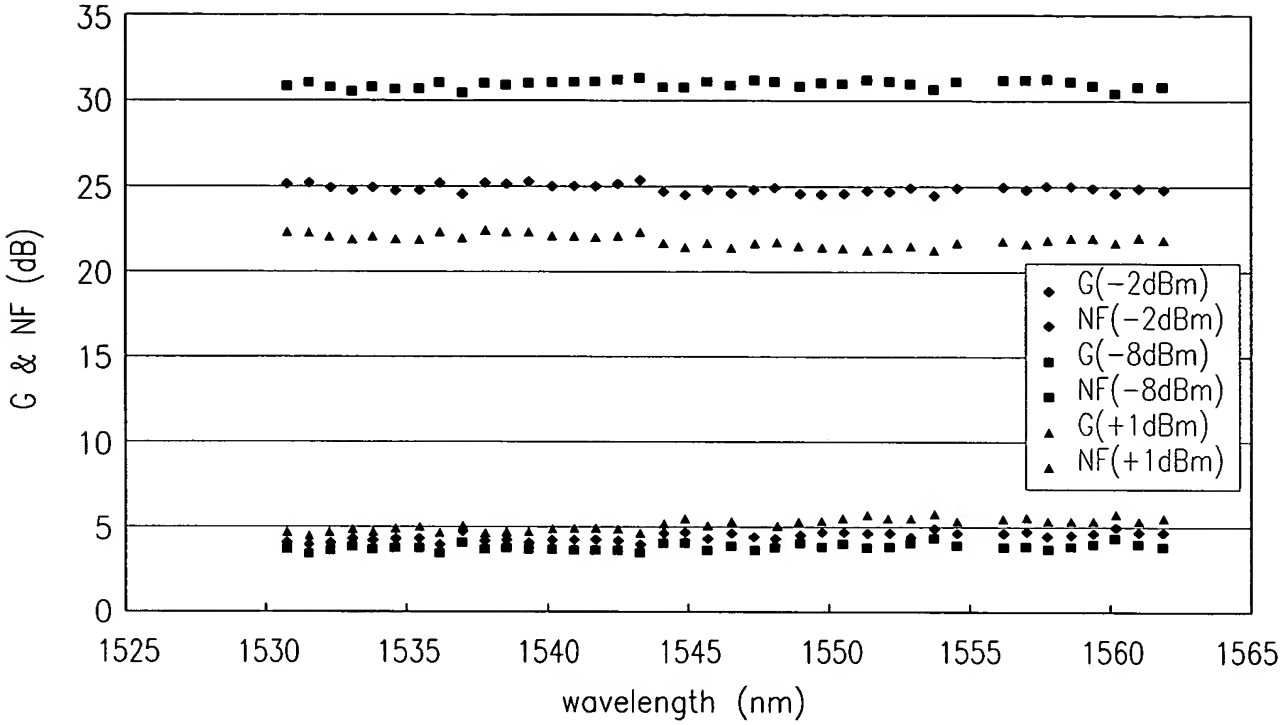

Monitor variation of specific input channel power
S200
Search lookup table to find pump power corresponding to specific input channel power
S210
Delay by transit time of DCF
S220
S240
Control pump power
S230

FIG.9


35
30
25
20
15
10
5
0
G & NF (dB)
1525
1530
1535
1540
1545
1550
1555
1560
1565
wavelength (nm)
G(-2dBm)
NF(-2dBm)
G(-8dBm)
NF(-8dBm)
G(+1dBm)
NF(+1dBm)